



Summary of Fishery Survey Lost Lake, Taylor County, 2017

WDNR's Fisheries Management Team from Park Falls completed an electrofishing survey in late spring 2017 to characterize the fish community in Lost Lake, where the U. S. Forest Service had recently acquired fee title to the entire shoreland. Our survey results documented Lost Lake's low potential to support a meaningful fishery, and they helped to inform USFS's investment decisions for future recreational improvements. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society. "Keeper size" is our own description applied to bluegill ≥ 7 inches long and black crappie ≥ 9 inches long, based on known angler behavior.

Survey Effort

With water temperature at 63 - 64°F our May 31, 2017 electrofishing survey should have coincided with the early spawning activities of largemouth bass and other sunfishes. We sampled the entire 0.80 miles of Lost Lake's shoreline in 0.32 hours, dip-netting all fish species in our complete shoreline circuit.

Habitat Characteristics

Lost Lake is a 19-acre, hard water lake located within the Chequamegon-Nicolet National Forest about 15 miles northwest of Medford, WI. It lies at the base of a narrow-crested, steep-sided esker and drains through wetlands to the North Fork Yellow River. Lost Lake has a surface area of 19 acres, maximum depth of 28 feet, very turbid water, a near-shore lakebed comprised of muck (20%) and gravel (80%), and low aquatic plant density. Upland hardwoods occupy 80% of the shoreland and tag alder covers the remainder. On March 1, 2017, dissolved oxygen concentration in the ice-covered lake was adequate in the upper half of the water column, gradually decreasing from 7.9 mg/l at 2 feet deep, to 6.2 mg/l at 7 feet, and 2.5 mg/l at 9 feet. Oxygen level was uniformly low (0.7 mg/l) at depths 10 – 20 feet, however. Presently, there is no developed boat landing, though canoes and small boats could be carried in or launched from a trailer without too much difficulty at the former homestead on the north shore.

Summary of Results

Our survey finding support the opinion of a local guide who posted an on-line review of his fishing experience at Lost Lake in summer 2017: *"It's an okay spot. The fishing isn't good as it is all very small panfish and some 6" bass."* Our sample included no gamefish and only four fish species. Pumpkinseed were highly abundant, but few surpassed 5 inches long. By comparison, yellow perch ≥ 5 inches long

had low to moderate population abundance with some individual attaining preferred size (10 inches) and approaching memorable size (12 inches).

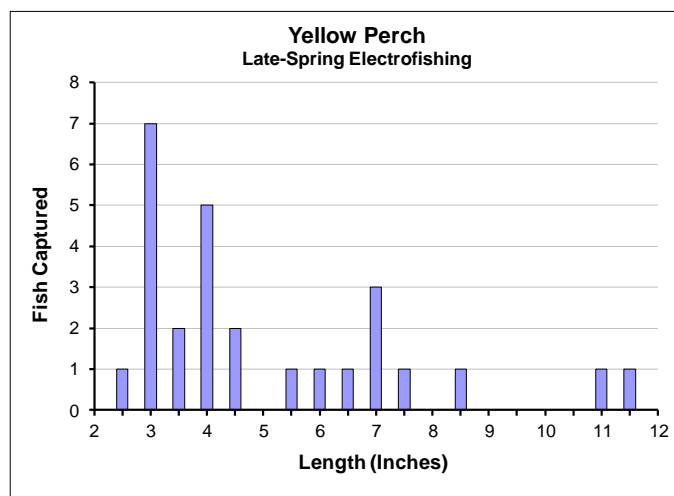
The remaining species in our sample were fathead minnows and golden shiners captured at electrofishing rates of 57 and 148 fish per hour, respectively. Both are known to possess physical or behavioral adaptations that allow them to tolerate very low dissolved oxygen concentrations (0.2 to 0.3 mg/l) in winter. Even though dissolved oxygen was satisfactory for fish survival in late winter 2017, the prevalence of these tolerant species, coupled with a low species count and the scarcity or absence of gamefish, point toward a fish community strongly influenced by recurrent winterkill—fish mortality caused by oxygen depletion in the ice-covered season. Moreover, high turbidity appears to limit the growth of submerged aquatic plants that typically fulfill many ecological functions, including habitat for fish and aquatic life. With impaired water quality and limited littoral habitat, apparently stemming from natural, rather than man-made causes, we believe that taking practical measures to enhance the recreational fishery in Lost Lake would not be worthwhile.

Yellow Perch



Late Spring Electrofishing

Captured 13 per mile or 32 per hour $\geq 5"$	
Quality Size $\geq 8"$	30%
Preferred Size $\geq 10"$	20%
Memorable Size $\geq 12"$	0%

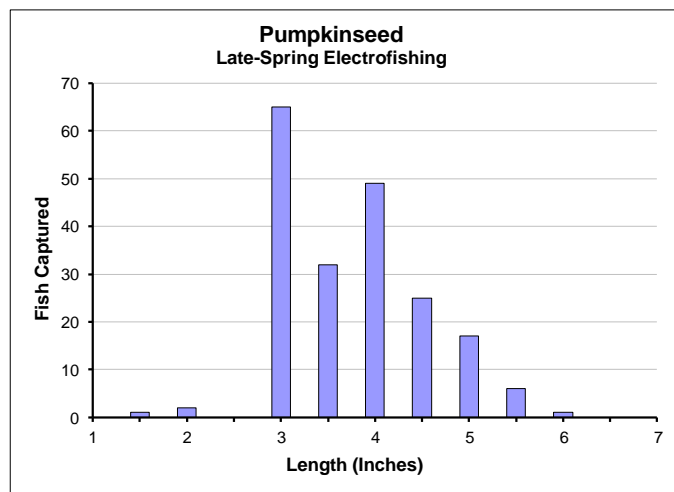


Pumpkinseed



Late Spring Electrofishing

Captured 244 per mile or 615 per hour $\geq 3"$	
Quality Size $\geq 6"$	0.5%
Keeper Size $\geq 7"$	0%
Preferred Size $\geq 8"$	0%



Survey data collected and analyzed by: Chad Leanna, Kendal Patrie, and Jeff Scheirer—WDNR Fishery Team, Park Falls.

Written by: Jeff Scheirer—Fishery Biologist, November 7, 2017.

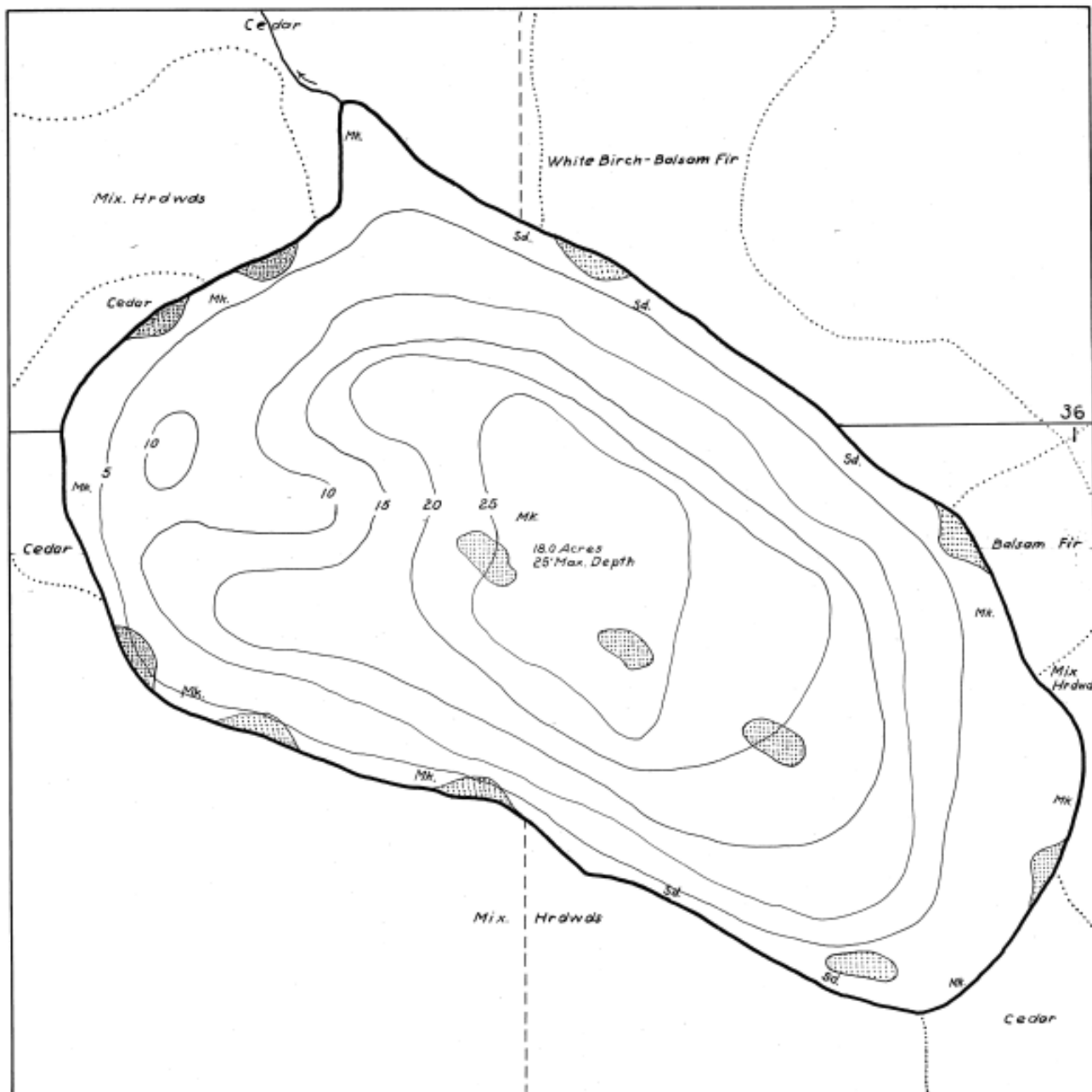
Reviewed by: Steve Gilbert—Woodruff Field Unit Supervisor, January 25, 2018.

Approved for web posting by: Mike Vogelsang—Northern Administrative District Supervisor, January 29, 2018.

LAKE SURVEY MAP

WISCONSIN CONSERVATION DEPARTMENT
BIOLOGY DIVISION
LAKE AND STREAM IMPROVEMENT SECTION

LAKE LOST
SECTION 1-36
TOWNSHIP 32-33 N
RANGE 2 E-W
TOWN OF GROVER & WESTBORO
COUNTY TAYLOR



T
33
N
T
32
N

N

DATE May 25, 1938
COMPILED BY _____
TRACED BY RFF
SOURCE OF INFORMATION
U.S. Department of Agriculture
Forest Service Lake And Stream
Survey
SOUNDINGS
U.S. Forest Service
DATES OF MAP REVISION _____
WORK AGENCY _____

R2W LAKE IMPROVEMENT RECORD

TYPE	DATE	TOTAL
BRUSH REFUGES	_____	_____
SAPLING TANGLES	_____	_____
SPAWNING BOXES	_____	_____
* MINNOW SPAWNERS	_____	_____

SCALE: 1 inch = 110 feet

LEGEND
 WEED BEDS
 ROCKY SHOALS
 SAND
 CLAY
 GRAVEL
 MUCK
 DWELLING
 ABANDONED DWELLING
 RESORT